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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,619	07/18/2003	Takanobu Ichihara	056208.52589US	2227
23911	7590	10/28/2005		
CROWELL & MORING LLP INTELLECTUAL PROPERTY GROUP P.O. BOX 14300 WASHINGTON, DC 20044-4300			EXAMINER TRAN, DIEM T	
			ART UNIT	PAPER NUMBER
			3748	

DATE MAILED: 10/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Tate

Office Action Summary

Application No.

10/621,619

Applicant(s)

ICHIHARA ET AL.

Examiner

Diem Tran

Art Unit

3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on amendment filed on 8/8/05.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3 and 5-10 is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

This office action is in response to the amendment filed on 8/8/05. In this amendment, claims 1, 6-10 have been amended. Overall, claims 1-10 are pending in this application.

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

*Claims 1, 2, 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hajima et al. (JP 07-139455) in view of Sadakane et al. (US Patent 5,632,249).*

Regarding claim 1, Hajima discloses a starting apparatus of an internal combustion engine comprising: main air passage including an intake manifold (2) for supplying air to each cylinder of the engine, a throttle valve (13) provided upstream of the intake manifold in the main air passage (see Figure 1), a bypass air passage (14) provided to bypass the throttle valve in parallel to the main air passage and connected close to the intake port of each cylinder (see Figure 1), a vaporization fuel supply means (15) for supplying vaporized fuel to the bypass air passage, and a bypass air control valve (16) capable of controlling the incoming air quantity into the bypass passage, however, fails to disclose that main air control valves for the main air passage are provided near intake ports in respective pipes of the intake manifold. Sadakane teaches that it is conventional in the art, to utilize main air control valves (9) for the main air

passage being provided near intake ports in respective pipes of the intake manifold (see Figure 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made, to have utilized the teaching of Sadakane in the Hajima apparatus, since the use thereof would have promoted vaporization of an injected fuel in order to reduce unburned hydrocarbon emissions in the exhaust gas.

Regarding claim 2, Hajima further discloses that at the time engine start-up cranking, the bypass air control valve is opened and the main air passage is closed, and vaporized fuel is supplied to the bypass air passage by the vaporization fuel supply means (see translation, pages 2, 3, parts [0013], [0016]).

Regarding claim 4, Hajima further discloses that the vaporization fuel supply means comprises an auxiliary fuel injection valve and a heater for heating the fuel injected from the auxiliary fuel injection valve (see translation, page 3, lines 1-4).

#### *Allowable Subject Matter*

Claims 3-10 are allowed.

#### *Response to Arguments*

Applicant's arguments filed on 8/8/05 have been fully considered but they are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

### *Conclusion*

Any inquiry concerning this communication from the examiner should be directed to Examiner Diem Tran whose telephone number is (571) 272- 4866. The examiner can normally be reached on Monday -Friday from 8:30 a.m.- 6:00p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reached on (571) 272- 4859. The fax number for this group is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for

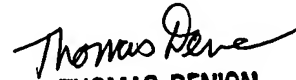
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unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 800-786-9199 (toll-free).



Diem Tran  
Patent Examiner  
Art unit 3748

DT  
October 25, 2005



**THOMAS DENION**  
**SUPERVISORY PATENT EXAMINER**  
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